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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,760	04/20/2001	Lixin Luke Xue	4981*294	1288

23416 7590 01/29/2003

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EXAMINER

WALLS, DIONNE A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 01/29/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,760

Applicant(s)

XUE ET AL.

Examiner

Dionne A. Walls

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rohrbach et al (US. Pat. No. 5,744,236) in view of Woods et al (US. Pat. No. 4,729,391) and Keritsis (US. Pat. No. 5,133,367).

Rohrbach et al discloses a filter media 10 formed from a plurality of elongated hollow fibers 20 having an internal cavity 22 which has an opening 24, smaller than the cavity width (corresponding to the claimed "semi-open cavity"), to the fiber 20 surface and each retaining within the internal cavity 22 a large number of relatively small particles 18, said small particles being an adsorbent such as activated carbon (corresponding to the claimed "adsorption/absorption particle"). The fibers comprising the filter media may be either tri-lobal or quadri-lobal formed from thermoplastic polymers such as polyolefins (see cols. 1-4; abstract and figures). While Rohrbach et al may not explicitly state that the fibers of its filter material are "micro-porous", it does state that the fibers are "relatively small" having a diameters which can be smaller than 10 microns. Therefore, it follows that the pores/cavities which contain the activated carbon would be even smaller. And since "microns" is the unit of measurement, these cavities would be considered "micro-pores", which means that the fibers of Rohrbach

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are obviously "micro-porous". While Rohrbach et al may not disclose that the filter of its invention can be used as a cigarette filter, it does state that it can be used for gas phase applications (col. 4, lines 18-20) . Further, Woods et al discloses a cigarette comprising a tobacco rod and a filter made of thermoplastic polymers, such as those prepared from polyolefins, which has use as a filter for attachment to a cigarette for removal of particulate material from the smoke produced by burning cigarette tobacco (see col. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to fabricate the filter of Rohrbach et al for use as a cigarette filter for filtering the smoke to be inhaled from a cigarette because it is known, as evidenced by Woods et al, that thermoplastic filter material can be used as cigarette filters, and is consistent with the teaching of Rohrbach et al – which teaches gas-phase filtering applications for its filter. Further, while the filter of Rohrbach et al modified by Woods et al may not teach that the semi-open cavities are loaded with flavorant material in solid or liquid forms, Keritsis does disclose that it is known to deposit menthol (note: absent any indication to the contrary, it is assumed that this menthol is "pure" menthol) and other flavorants on activated carbon particles in the filter section of a smoking article. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to do so to the filter of Rohrbach et al modified by Woods et al in order to impart a flavor or taste to the smoking article. And, while Keritsis may not specify the form (liquid or solid) that the flavorant is added, it obviously would have to be either a liquid or solid application in order to ensure said substance was "deposited" on the carbon pursuant to the teaching in the art.

Regarding claim 6, while Rohrbach et al modified by Woods et al and Keritsis may not disclose the claimed amount of flavorant material, one of ordinary skill in the art would have arrived at a flavorant amount within this broad range based on the amount of flavor desired to be delivered to the smoker.

Regarding claims 7-9, the combined references would suggest a cigarette filter in combination with a tobacco rod, in order to provide, to the consumer, a smoking article having a filter for removing toxic components of cigarette smoke.

Response to Arguments

3. Applicant's arguments filed October 31st, 2002 have been fully considered but they are not persuasive.

- Applicant argues that Rohrbach fails to disclose or suggest that the fibers of its invention can be used in cigarette filters, and that the fibers of Rohrbach are used for the removal of odors, not the release of flavor. Applicant further argues that there is no suggestion, teaching or motivation to combine the Rohrbach reference with the Woods reference. The Examiner disagrees. The Rohrbach reference discloses filter media comprised of microporous polyolefin fibers, which can be used in gas-phase applications – generally. There is no requirement that the filter be used exclusively to remove odor. Woods discloses a cigarette filter which is also comprised of microporous polyolefin fibers. It follows that since it is known, by the Woods reference, to employ microporous thermoplastic fibers in the filtering of tobacco smoke, one having ordinary skill in the art would be inclined to use the filter of Rohrbach for the same operation, since, structurally, the two filter components are essentially the same, and are both

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used in gas-phase applications. The combination of the Rohrbach and Woods reference is, therefore, considered to be proper. Additionally, from the teaching of Keritsis, we learn that it is well-known to deposit menthol on carbon particles in the filter section of a smoking article. The Examiner contends that it would have been obvious to one having ordinary skill in the art at the time of the invention to then add menthol to the filter of Rohrbach and Woods for the purpose of imparting flavor or taste to the smoking article as taught in Keritsis. Therefore, the rejections made over the prior art are considered to be proper.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

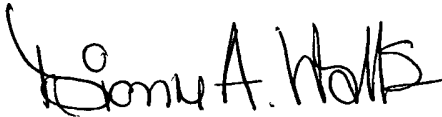
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne A. Walls whose telephone number is (703) 305-

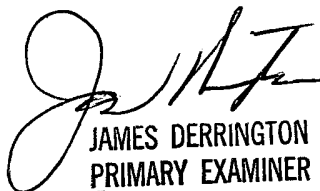
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0933. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.


Dionne A. Walls
January 24, 2003


JAMES DERRINGTON
PRIMARY EXAMINER
ART UNIT-137-1731